Troubleshooting

1. After installation, the display doesn't work
   a) Are all wires connected properly?
   b) Is the vehicle ACC ON?
   c) Is the reversing gear engaged (the reversing light should turn on);
2. Damaged sensor detected
   a) Are all sensors plugged into the ECU correctly and tightly?
   b) Is the sensor wire broken?
   c) Is the sensor covered by mud or snow?
   d) Is the sensor damaged?
3. False warning
   a) Are all sensors plugged into the ECU in the correct position tightly?
   b) Does any sensor detect the ground?
4. When the reversing gear is engaged, the display always shows 0.5m or 0.6m.
   a) Is the sensor mounting too low or facing to the ground?
   b) Is sensor mounted upside-down?
5. Warning sound is too low
   a) Adjust the volume adjustable switch
6. If the problem persists, please follow these steps
   a) For consumers: Contact your dealer or Steelmate service center
   b) For Installer or dealer:
      1). Replace the ECU and recheck the system
      2). Test the sensors with certified ECU by a flat wooden board
      3). Plug the certified sensors into the ECU and recheck
      4). Email your questions and we will reply ASAP.

Warranty

I. The unit is warranted for a limited period from the date of purchase. In the event of any defect arising in the unit when you use it as per the instructions during the warranty period, the repair would be carried out free.
l It is required to show this Warranty Card when have the unit repaired.
l The model and series number on unit must be the same as the information in the Warranty Card.

II. This warranty is non-transferable and is automatically void if:
l The original purchaser has not completed the warranty card
l The unit's serial number is defaced, missing or altered
l The unit has been modified or used in a manner contrary to its intended purpose
l The unit has been damaged by accident, unreasonable use, neglect, improper service and installation.

III. The warranty does not cover damage to the unit caused by installation or removal of the unit.

Vehicle No_____
Product No_____
Date of produce _____
Date of purchase _____
Remarks_____
_____

Dealer's stamp:_____

Attention

This parking assist system is designed as a reversing aid. It is not a substitute of driver's responsibilities normally assumed when reversing. Steelmate does not liable for any damages caused by reversing only rely on this system. Proper driving skills, such as slow down, use of mirror or lookout etc. is always essential.

1. This unit is for vehicles with 12V DC only
2. Please install this unit by a professional technician
3. Avoid high temperature and high voltage while laying out the wire harness
4. Wire connection point should be insulated
5. Conduct test after finishing the installation

Steelmate reserves the right to change the product information without prior notice.

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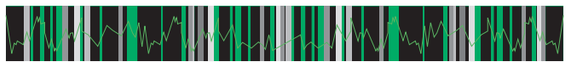
Steel mate®

Wireless Digital
Vehicle Parking Assist System



User's Manual

PTS400T / PTS400TV

Reasons to choose Steelmate

1. Professional manufacturer with super quality
2. Complete range of products, you can choose what you need easily.
3. There are agents/distributors in more than 60 countries, quick response
4. More than 100 engineers in the company, you can enjoy the latest technology.
5. Products have international approvals, quality guaranteed
6. Nearly 20 years leading experience in the automotive industry
7. ISO 9001:2000 and ISO/TS16949:2002 and ISO 14001:2004 certified
8. The National Famous Trademark in the Chinese automotive industry

Features & Specifications

The parking assist system is an ultrasonic distance monitoring system. It electronically detects the area behind your vehicle during reversing, and alerts you with audible tone / voice and digital display if there is an obstacle behind your car.

Every piece of our products has passed the most stringent test before releasing to the market. It is reliable at a wide temperature range (-40°C~ +85°C) and becomes very useful when you are reversing at a raining day, snowing day or at night etc. With the help of Steelmate's parking assist system, you can enjoy a convenient and nervous - free reversing.

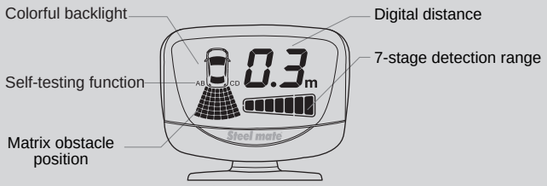
Features

- Complete rear protection
- Color backlight LCD display with universal adjustment
- Wireless display with audible /voice & visual warning
- Self-testing function
- Detachable sensor with waterproof wire connector
- Easy installation
- New anti-false alarm technology
- No interference with the car electronics system
- Perfect performance in all weather conditions (-40°C ~ +85°C)
- Heavy rainproof design

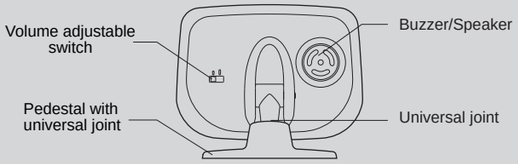
Specifications

- Voltage: 12 V ± 3V
- Display range: 2.5~0.3m
  Detection range: 2.5~0.1m
- Operating temperature: -40°C~ +85°C
- Beep volume: 70 ~ 90dB
- Input: <4W

LCD Display



(main side)



(backside)

Detailed description:

1. Colorful backlight
Backlight color will be changed according to the distance: white，blue，green，orange，red，red/white.

2. Self-testing function
The system will test all the sensors automatically when the reverse gear is engaged. The total number and the position of the damaged sensor will be shown on the display.

3. Matrix LCD indication
Matrix indication will be varied according to the obstacle's size and shape.

4. Obstacle distance indication
Obstacle distance detection range: 0.1~2.5m
Obstacle distance display range: 0.3~2.5m
The digital distance will be changed every 0.1 m.

5. 7-stage
The 7-stage indication will be changed step by step according to the distance of the obstacle.

6. Volume adjustable switch
Audible volume can be switched to high volume or low volume.

7. Pedestal with universal joint
The display can be fixed with the 3M sticker on the dashboard.

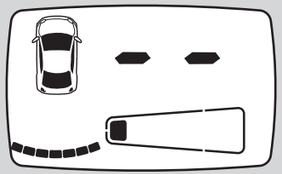
8. Buzzer/Speaker
4-stage warning (PTS400T)
Voice distance reporting (PTS400TV.)

9. Universal joint
Universal joint base, the display direction can be changed universally.

Colorful backlight
(Meter or Feet) display

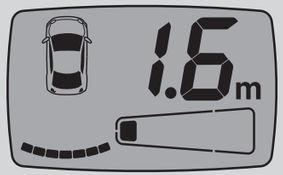
When reversing gear is engaged, the system will be activated and all sensors will be tested automatically. The backlight color of the display will change in sequence (white, blue, green, orange, red).

- The obstacle distance is >2.5m , the white backlight will turn on with the 1st stage flashing. The display shows as below:



White backlight

- The obstacle distance is 2.5~1.5m, the blue backlight will turn on with the 1st stage flashing. The obstacle's location will be show on the matrix and the digital number shows the nearest obstacle's distance. The LCD display shows as below:

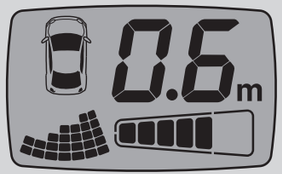


Blue backlight

- The obstacle distance is 1.5m~1.0m, the green backlight will turn on with 1st ~3rd stage flashing. The obstacle's location will be show on the matrix and the digital number shows the nearest obstacle's distance. The LCD display shows as below:

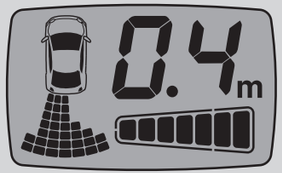
Green backlight

- The obstacle distance is: 1.0m~0.6m, the orange backlight will turn on with 1st~5th stage flashing. The obstacle's location will be show on the matrix and the digital number shows the nearest obstacle's distance. The LCD display shows as below



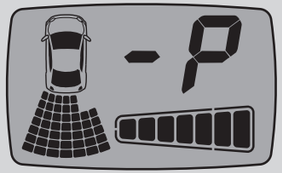
Orange backlight

- When the obstacle distance is 0.6m~0.3m, the red backlight will turn on with 1st~7th stages flashing. The obstacle's location will be show on the matrix and the digital number shows the nearest obstacle's distance. The LCD display shows as below



Red backlight

- When the obstacle distance is less than 0.3m, the red and white backlight will flash alternately. All 7-stage will flashing. The obstacle's location will be show on the matrix and the "-P" figure shown on the display. The LCD display shows as below



Red/White backlight

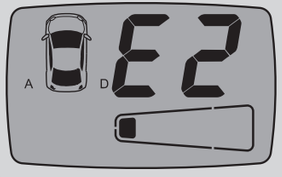
Self-testing function

The system will test all the sensors when the reversing gear is engaged.
If all the sensors are normal, the system will beep once and the LCD display will flash once.
If there is any problem with the sensors, the system will beep three times to indicate that one or more sensors have problem with the green backlight turns on. The damaged sensor's position----A, B, C, or D will be shown on the display. The number after "E" indicates the total number of the damaged sensors .

The total number of the damaged sensors

The damaged sensor's position

Example 1: sensor A has problem
(E1: 1 damaged sensor)

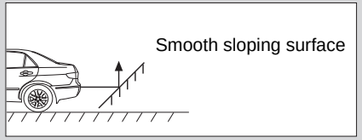


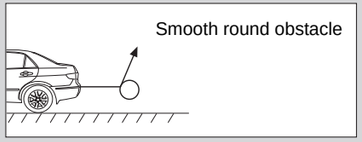
Example 2: sensors A and D have problems
(E2: 2 damaged sensors)

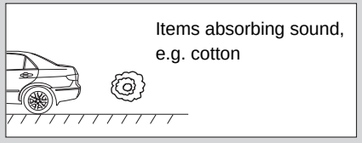
* Check the damaged sensors and replace them ASAP. The system will work with the sensors that are in good condition, but the damaged sensor cannot detect obstacle.

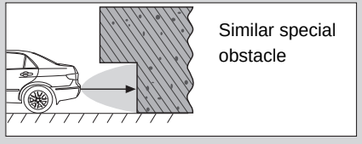
Notice

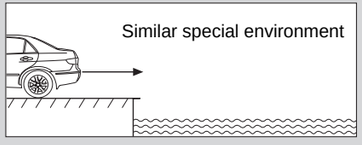
Misleading detection may occur in the following situations:







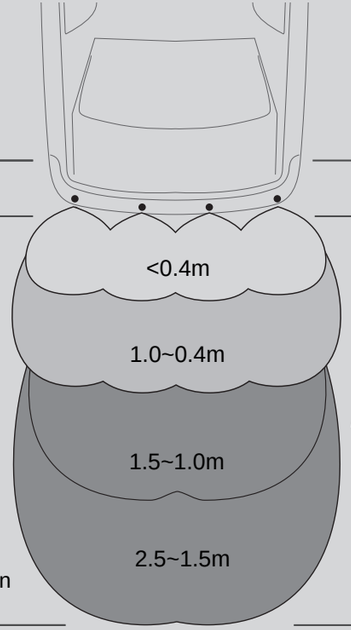




- After installation, check if the system is in order before use
- Heavy rain, dirt or damaged sensor could cause incorrect detection.
- Ensure the system is in order before use.
- Ensure that there is no false alarm when the vehicle is reversing.

The product is a driver assistance device. No warranty as to the operating efficient of the system or prevention of accidents is guaranteed.

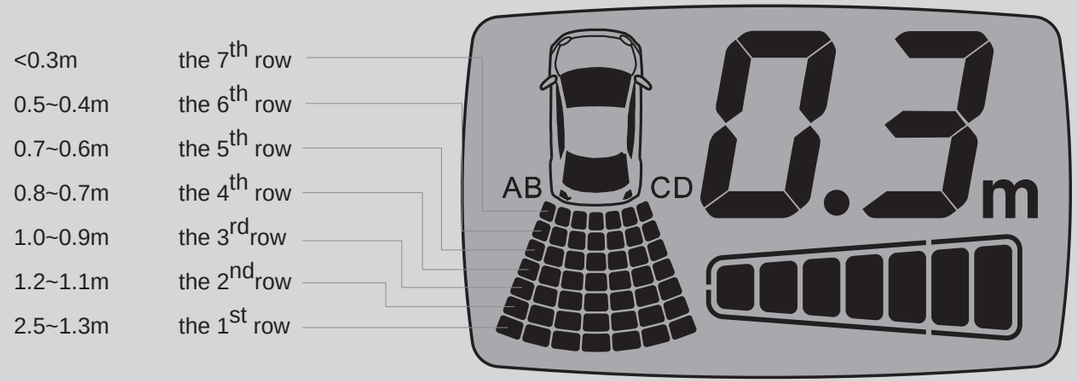
The detection and reporting mode of PTS400T(Audible) and PTS400TV (Voice distance reporting)



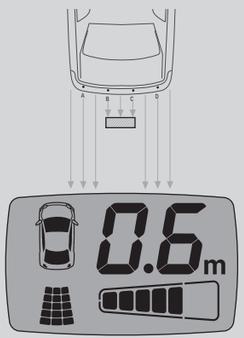
Backlight	Buzzer	Voice	Distance display	Matrix LCD indication	7-stage indication
Red/white (flashes)	Be ———	Stop 0.3m	-P	The 7th row	The 7th stage
Red	Be—Be—	0.4m 0.5m 0.6m 0.8m	2.5m～0.3m	The 6th row The 5th row The 4th row The 3rd row The 2nd row	The 6th stage The 5th stage The 4th stage The 3rd stage The 2nd stage
Orange	Be-Be-Be-Be-				
Green	Be--Be--	1.0m 1.2m 1.5m			
Blue	No Beep	2.0m		The 1st row	The 1st stage
White		Attention (2.5m)			

(* When voice reports the distance, the buzzer will not beep)

Matrix LCD indicator

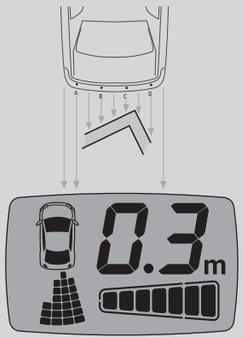


Example 1:



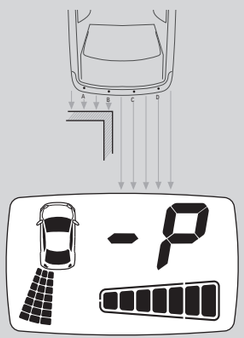
Orange backlight

Example 2:



Red backlight

Example 3:



The red backlight and the white backlight will flash on the screen alternately